## (19) World Intellectual Property Organization

10 June 2004 (10.06.2004)

International Bureau (43) International Publication Date



## 

PCT

## (10) International Publication Number WO 2004/049260 A2

(51) International Patent Classification7:

G06T 7/20

(21) International Application Number:

PCT/GB2003/005007

(22) International Filing Date:

18 November 2003 (18.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0227566.7

26 November 2002 (26.11.2002)

(71) Applicant (for all designated States except US): BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY [GB/GB]; 81 Newgate Street, London EC1A 7AJ (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LI, Yongmin [CN/GB]; 167 Cavendish Street, Ipswich, Suffolk IP3 8BG (GB). XU, Li-Qun [GB/GB]; 34 Dodson Vale,

Kesgrave, Suffolk IP5 2GT (GB). MORRISON, David, Geoffrey [GB/GB]: 10 Tylers Green. Trimley, Felixstowe, Suffolk IP11 0XF (GB). NIGHTINGALE, Charles [GB/GB]; 39 Quilter Road, Felixstowe. Suffolk IP11 7JL (GB). MORPHETT, Jason [GB/GB]; Valley View, 41 Holton Road, Halesworth, Suffolk IP19 8HG (GB).

(74) Agent: WALLIN, Nicholas, James: BT Intellectual Property Department, PPC5A, BT Centre, 81 Newgate Street, London EC1A 7AJ (GB).

(81) Designated States (national): CA. US.

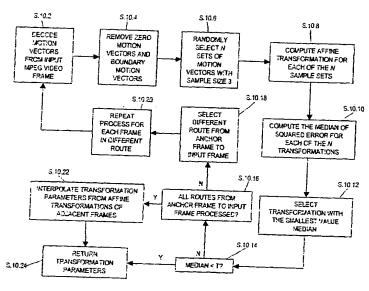
(84) Designated States (regional): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

## Published:

without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND SYSTEM FOR ESTIMATING GLOBAL MOTION IN VIDEO SEQUENCES



(57) Abstract: The invention relates to estimating the global motion between frames of a motion-compensated inter-frame encoded video sequence, directly from the motion vectors encoded within the frames. For any particular frame, a motion estimation is determined from motion vectors direct from the frame's anchor frame to the frame in question. This motion estimation is then checked against pre-determined criteria, and where the criteria are not met, re-estimation along a different route is performed, using the bi-directional motion vectors contained within B-frames. A panoramic image generating method and system which makes uses of the global motion estimations thus obtained is also described.

